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09/759,998	01/11/2001	Wayne J. Schmidt	291958118US3	1313

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EXAMINER	
UNDERWOOD, DONALD W	
ART UNIT	PAPER NUMBER

3652

DATE MAILED: 05/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.	09/759998	Applicant(s)	Schmidt
Examiner	Underwood	Group Art Unit	3652

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

### Status

- the application
- Responsive to communication(s) filed on 01/11/01
- This action is FINAL.
- Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

### Disposition of Claims

- Claim(s) 1-53 is/are pending in the application.
- Of the above claim(s) NONE is/are withdrawn from consideration.
- Claim(s) \_\_\_\_\_ is/are allowed.
- Claim(s) 1-53 is/are rejected.
- Claim(s) \_\_\_\_\_ is/are objected to.
- Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

### Application Papers

- See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.
- The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- The specification is objected to by the Examiner.
- The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119 (a)-(d)

- Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- All  Some\*  None of the CERTIFIED copies of the priority documents have been received.
- received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
- received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

### Attachment(s)

- Information Disclosure Statement(s), PTO-1449, Paper No(s). 3  Interview Summary, PTO-413
- Notice of Reference(s) Cited, PTO-892  Notice of Informal Patent Application, PTO-152
- Notice of Draftsperson's Patent Drawing Review, PTO-948  Other \_\_\_\_\_

## Office Action Summary

Detailed Action

1. The specification is objected to as failing to provide a basis for cap member (claim 21). Clarification is required.
2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The word "rotationally" in line 2 should be deleted since elements 100 and 179 are rigidly fixed together and not rotationally fixed together.
4. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what structure from the invention comprises the cap member. Clarification is needed.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 21, 22 and 23 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ueyama et al.

Regarding claim 21, note 122 and 123 in figure 13 comprise a vertical member.

Regarding claim 22, note the tube between elements 160 and 142.

Regarding claim 23, note element 160.

7. Claims 25-28 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Nam et al.

8. Claims 25, 26 and 27 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ueda et al.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3641

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1, 2, 4, 15, 16, 18, 19, 31, 35 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al in view of Miyamoto et al.

Akimoto teaches moving a housing along a rail and using a vertically extendable and rotatable vertical member to support an arm arrangement.

Miyamoto teaches rotating an end effector about a horizontal axis at the end of an arm.

It would have been obvious to substitute an arm as taught by Miyamoto for the arm arrangement in Akimoto if desiring to move and invert wafers one at a time.

Regarding claim 31, it would have been obvious to use any conventional actuator for the vertical member in Akimoto including a linear actuator.

12. Claims 3, 14, 17, 31, 34, 35, 39, 40 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al in view of Skrobak and Miyamoto et al.

It would have been obvious to use an articulated arm in lieu of the arm arrangement in Akimoto if desiring to move only one wafer at a time in view of the teaching in Skrobak .

It would further be obvious to provide an end effector capable of rotation about a horizontal axis if desiring to invert the wafer in view of the teaching in Miyamoto.

Regarding claim 31, the remarks in the preceding rejection are herein repeated.

13. Claims 5, 20 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto in view of Miyamoto et al as applied to claim 1 above, and further in view of Oda et al.

It would have been obvious to substitute for the track and screw drive in Akimoto any other conventional arrangement including that claimed by applicants in view of the teaching in Oda (elements 7, 8).

14. Claims 6-10, 16 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al in view of Miyamoto et al as applied to claim1 above, and further in view of Olson

It would have been an obvious substitution of equivalents to use a gripper as taught by Olson in lieu of the suction gripper in Miyamoto.

15. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al in view of Miyamoto as applied to claim 1 above, and further in view of Lange.

It would have been obvious to use any conventional sensor to sense a wafer presence on the end effector in Akimoto as modified by Miyamoto including one as taught by Lange (element 11).

16. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al in view of Miyamoto et al and Lange as applied to claim11 above, and further in view of Olson

It would have been an obvious substitution of equivalents to use a gripper as taught by Olson in lieu of the suction gripper in Miyamoto.

17. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueyema et al in view of Nam et al.

It would have been obvious to provide pads, parts, channels and pins on the end effector in Ueyema in view of the teaching of Nam.

18. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nam et al.

Regarding claim 29, whether 12 in Nam were one piece as shown in figure 2A or two pieces as claimed would have been an obvious matter of design expedience since one arrangement would provide no unobvious result over the other.

Regarding claim 30, the exact location of the raised areas would be an obvious matter of design choice since one arrangement would provide no unobvious result over another.

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19. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al in view of Nam et al.

It would have been obvious to shape the end effector in Ueda in a Y shape in view of the teaching in Nam.

20. Claims 32, 33, 37, 38, 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al in view of Miyamoto et al as applied to claim 31 above, and further in view of Nam et al.

It would have been obvious to use a paddle as taught by Nam for that in Miyamoto.

Regarding claims 32 and 33, the exact location of the raised areas would be an obvious matter of design choice since an arrangement would provide no unobvious result over another.

21. Claims 46 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueyama et al in view of Miyamoto et al.

It would have been obvious to mount the end effectors in Ueyama to rotate about horizontal axis in view of the teaching in Miyamoto.

22. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueyamo et al in view of Miyamoto et al as applied to claim 46 above, and further in view of Olson.

It would have been obvious to use end effectors as claimed in Ueyama in view of the teaching in Olson.

23. Claims 48 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueyama et al in view of Miyamoto et al as applied to claim 46 above, and further in view of Nam et al.

It would have been obvious to use end effectors as claimed in Ueyama in view of the teaching in Nam. The location of the raised areas would be an obvious matter of choice since one arrangement would provide no unobvious result over another.

24. Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueyama et al in view of Miyamoto et al as applied to claim 46 above, and further in view of Oda et al.

It would have been obvious to substitute for the unit drives in Ueyama any other conventional drive including that taught by Oda (elements 7,8).

25. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al in view of Miyamoto et al.

It would have been obvious to pivot the end effector in Ueda about a horizontal axis in view of the teaching in Miyamoto.

26. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueyama et al in view of Ueda et al and Miyamoto et al.

It would have been obvious to add a second processing module in Ueyama in view of the teaching in Ueda and to pivot the end effectors about horizontal axes in view of the teaching in Miyamoto.

27. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

28. Claims 1-5, 14-20, 31-35 and 37-53 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of U.S. Patent 6,318,951 in view of Miyamoto et al.

It would have been obvious to pivot the end effectors in the patented claims about horizontal axes in view of the teaching in Miyamoto.

29. Claims 6-13, and 36 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of U.S. Patent No. 6,322,119. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are broader variations of the patented claims and would preclude their practice if allowed

30. Claims 21-30 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of U.S. Patent No. 6,318,951. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are broader variations of the patented claims and would preclude their practice if allowed.

31. Any inquiry concerning this communication should be directed to Donald Underwood at telephone number 703-308-1112.

Underwood/dw

April 26, 2002

*Donald W. Underwood 05/01/02*  
DONALD W. UNDERWOOD  
PRIMARY EXAMINER